DOCUMENT RESUME

ED 345 861 PS 020 569

AUTHOR Brock, Sharon L.
TITLE Achievement and Enrollment Evaluation of the Early Childhood Development Program, 1990-1991.
INSTITUTION Kansas City School District, Mo.
PUB DATE Aug 91
NOTE 27p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Achievement; Achievement Gains; *At Risk Persons; Child Development Centers; *Early Childhood Education; *Early Intervention; *Educational Diagnosis; Enrollment Trends; Kindergarten; *Parent Education; Parent Participation; *Parents as Teachers; Preschool Children; Program Descriptions; Program Evaluation; Public Schools; Scores; Young Children
IDENTIFIERS Kansas City Public Schools MO

ABSTRACT

The Kansas City, Missouri, School District's Early Childhood Development program consists of the Parents as Teachers (PAT) and Early Learning Centers (ELC) programs. Both PAT and the ELC programs have a screening component, with PAT screening children from 12 to 36 months of age and ELC screening 3-, 4-, and 5-year-old children. The ELC instructional curriculum directly intervenes to eliminate developmental delays of at-risk students before they enter kindergarten. PAT is an educational program for parents of children younger than 6 years of age. The programs are designed to reduce the number of children with developmental delays through parent education and active parent involvement in the early learning processes of their children. A fifth-year evaluation of the two programs yielded the following findings: (1) all ELCs began each year at capacity (1,000 children) and capacity was maintained by drawing students from a waiting list; (2) enrollment in PAT has grown steadily since the first year of implementation to a high of 6,814 parents in 1990-91; (3) a total of 20,868 families have benefitted from PAT since the program started in 1986; (4) the number of children screened by the programs increased steadily through the years, but so did the number of children found to be at risk for developmental delays; (5) in 1990-91, 41% of the 1,896 1- to 3-year-old children screened by PAT were found to be at risk, as were 72% of the 4,329 3- to 5-year-old children screened at ELCs; (5) for about 25% of the ELC students, the programs worked to curb delays and allowed the students to catch up academically with their peers; and (6) a total of 72% of the ELC children who were old enough to enter kindergarten every year did not do so. An appendix supplies the district locations of ELCs. (AC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED345861

Achievement and Enrollment Evaluation of the Early Childhood Development Program

1990-1991

Sharon L. Brock
Program Evaluator

August 1991

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Phyllis Clay

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Evaluation Office
Desegregation Planning Department
The School District of Kansas City, Missouri

PS 020569

 BEST COPY AVAILABLE

Table of Contents

Page

Introduction 1

Program Description 1

Results 2

Enrollment and Screening 2

Achievement 4

Summary 11

References 15

Acknowledgements 15

Appendix A - Early Learning Centers District Locations 16

List of Tables

Table		Page
1	Early Childhood Development Program, Early Learning Centers, Program Capacity and Actual Capacity, 1990-1991	2
2	Early Childhood Development Program, Parents as Teachers Enrollment	3
3	Early Childhood Development Program, Screenings Completed 1986 through 1991	4
4	Early Childhood Development Program, End-of-Year Status of Early Learning Center Students	4
5	Early Childhood Development Program, Kindergarten Cohort ITBS Percentile Ranks, Former ELC Students Compared to District	6
6	Early Childhood Development Program, Summary Data Comparing Former ELC Students and a Random Sample of Non-ELC Students from the Same School, 1990 Second Grade ITBS Percentile Ranks	10
7	Early Childhood Development Program, Kindergarten Entrance Status and Current Enrollment Status of Former ELC Students	10
8	Early Childhood Development Program, Former ELC Students Kindergarten Classes, ITBS Percentile Ranks	11
A-1	Early Learning Centers District Locations	17

List of Figures

Figure		Page
1	ITBS Reading Achievement 1989 Kindergarten Cohort ELC Students	7
2	ITBS Language Achievement 1989 Kindergarten Cohort ELC Students	8
3	ITBS Math Achievement 1989 Kindergarten Cohort ELC Students	9
4	Former ELC Students Kindergarten 1989, 1990 & 1991	12
5	Former ELC Students Kindergarten 1989, 1990 & 1991	13

Achievement and Enrollment
Evaluation of the
Early Childhood Development Program

1990-1991

Introduction

The Early Childhood Development program evolved from the collaboration between the Kansas City, Missouri School District (KCMSD) and the Department of Elementary and Secondary Education. The KCMSD Early Childhood Development program began full operations during the 1986-1987 school year and has completed the fifth year of implementation. As specified in the *Long-Range Magnet School Plan* (Hale and Levine, 1986), an achievement and enrollment evaluation report occurs in the fourth and fifth years of implementation. A presentation of these data throughout five years of implementation (1986-1991) follows a brief description of the Early Childhood Development program.

Program Description

Representatives from the Kansas City, Missouri School District and the Department of Elementary and Secondary Education annually prepare an Implementation Model for the Early Childhood Development program. The annual Implementation Model reflects the experiences gained in previous years of program implementation and defines current year enrollment and screening goals. The premise of the Early Childhood Development program is that "Quality preschool and parent education programs improve the lives of children, their families and the quality of life of the community as a whole" (The School District of Kansas City, Missouri and the Department of Elementary and Secondary Education, 1990, p. 1).

The Early Childhood Development program consists of two distinct programs: Parents as Teachers (PAT) and the Early Learning Centers (ELC). Each program operates independently and separately, *i.e.*, each manages and maintains their own records. Currently, a district data base of Early Childhood Development student records is not in existence. Both PAT and the ELC programs have a screening component, with PAT screening children from 12 months to 36 months and the ELC screening three, four and five year old children. The latter screening identifies preschool children who score at least six months below their

chronological age in one or more areas of expressive language, receptive language and motor development. The ELC instructional curriculum directly intervenes to eliminate the developmental delays of these "at risk" students prior to their entering kindergarten. PAT is a program of parent education for parents of children birth through five years of age. The programs are designed to effectively reduce the number of children with developmental delays through parent education and active parental involvement in the very early learning processes of their children.

Results

Enrollment and Screening

Enrollment and screening data for the Early Childhood Development programs throughout the years of implementation were provided by the program administrators. The Early Learning Centers are located in the elementary schools within the KCMSD (see Appendix A, Table A-1). Space and resources are finite, therefore, the Implementation Model limits enrollment in the ELC programs to 1000 children. All centers begin each year at capacity, and capacity is maintained by placing children into an ELC classroom from the waiting list of eligible children. However, children are not placed into the program after mid-April of any year since only six weeks of school remain. The end-of-year figures for three years of implementation show near capacity enrollment each year (Table 1). Also, the current waiting

Table 1

Early Childhood Development Program
Early Learning Centers
Program Capacity and Actual Capacity
1990 - 1991

Year	Program Capacity[1]	Actual End-of-Year[2]	Percent of Capacity
1988-1989	1000	942	94%
1989-1990	1000	983	98%
1990-1991	1000	990	99%

Note: Percentages are rounded to the nearest whole percent.

1 Program capacity utilized by the ECD Office when placing students in the ELC program.

2 From July, 1991 ECD Office.

list for entry into an ELC classroom for 1991-1992 will consume better than one-third of next year's enrollment.

Enrollments in the Parents as Teachers program for five years of implementation are presented in Table 2. The PAT program exists in facilities not constrained by school-age student enrollment, thus capacity data are not relevant. As indicated in the tables, enrollment in PAT has increased steadily since the first year of implementation. The number of families served with children birth up to three years has almost tripled since 1986-1987, and enrollment of families with three through five year old children has increased five and one-half times since 1987-1988.

According to the Implementation Model, periodic monitoring of a child's development is a foundation for the educational guidance of parents. Recurrent screening increases the probability of detecting delays or physical problems that may later hinder a child's academic progress, and provides necessary guidance to parents regarding their child's development and maturation. Screening data available for the years of program implementation are presented in Table 3. The number of children found at risk has risen over the years, and the increase for 1990-1991 is most pronounced. The increasing proportion of at risk children is reflected, also, in the number of students entering kindergarten from ELC classrooms (Table 4). Currently, at the end of year screening over half the ELC children age-eligible to enter kindergarten were found still delayed for language and/or motor skills. An administrator of the ELC program described the population of children as "dramatically different" from that observed two years ago. The administrator characterized the current population as having greater developmental

Table 2

Early Childhood Development Program
Parents as Teachers Enrollment

Year	0 - 3 Years[1]	3 - 5 Years
1986-1987	1563	No Program[2]
1987-1988	2031	413
1988-1989	3177	843
1989-1990	3874	2153
1990-1991	4490	2324

1 Birth to 36 months.

2 Not funded under PAT during 1986-1987.

Table 3

Early Childhood Development Program
Screenings Completed 1986 through 1991

Age Group (Program) Status	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991
1 to 3 Years (PAT)					
Screened	590	834	1423	1566	1896
At risk (%)	183 (31%)	334 (40%)	400 (28%)	552 (35%)	783 (41%)
3 to 5 Years (ELC)					
Screened	----	2472	4247	4464	4329
At risk (%)	----	1231 (50%)	2460 (58%)	2595 (58%)	3103 (72%)

Note: Percentages are rounded to the nearest whole percent. PAT screens children up to the third birthday and ELC screens children from three years old to the fifth birthday.

Table 4

Early Childhood Development Program
End-of-Year Status of Early Learning Center Students

	Entering Kindergarten		Returning to ELC	
Year	N	N(% at risk)	N	N(% at risk)
1987 - 1988	----	-----	247	----
1988 - 1989	394	----	230	----
1989 - 1990	618	185(30%)	334	132(40%)
1990 - 1991	578	293(51%)	351	220(63%)
1991 - 1992	625	395(63%)	336	290(86%)

Note: Percentages are rounded to the nearest whole percent. Data indicate screened students age-eligible to attend kindergarten for a given year and represent end-of-year figures for the prior year, i.e., 578 of the 1989-1990 ELC students were age-eligible to enter kindergarten in 1990-1991.

delays (*i.e.*, more than six months), being much more unsettled (*i.e.*, thousands of transportation changes within the district were made in 1990-1991 for a population of 1000 ELC children), and having a primary care-taker someone other than a biological parent.

Achievement

Traditional achievement data (*e.g.*, standardized test scores) are available for those children entering kindergarten in the KCMSD. Achievement data suited for comparative analyses are not available for pre-school children. Therefore, the present report provides longitudinal analyses of a representative population of children who participated in the Early Childhood

Development program prior to entering kindergarten and who currently are enrolled in an elementary school in the KCMSD. Children who have experienced at least one year of the educational intervention as proscribed in the Implementation Model offer a database unique to the Early Childhood Development program - a population of students found to be "at risk" for academic difficulties and subsequently placed in an Early Learning Center instructional environment prior to kindergarten. With the onset of kindergarten instruction in a regular classroom, these former ELC students are exposed to the same academic environment and demands as non-ELC students. A measure of the benefits of the ELC programs to these children, some of whom may enter kindergarten still "at risk" academically, is gained through a comparative evaluation of the former ELC students.

A longitudinal evaluation of the achievement of former ELC students is enabled through cohort analysis. Former ELC students currently in the second grade have had three years experience in a regular classroom setting, and those that could be traced from kindergarten comprise the 1989 kindergarten cohort. A comparative study of the 1989, 1990 and 1991 ITBS scores between the district and this kindergarten cohort provides one assessment of the impact of the ELC programs on academic success. Additionally, if former ELC students benefitted from the intervention provided in the ELC program, then statistically significant differences between former ELC students and non-ELC students should not be found. Finally, another assessment of the ELC programs is gained through an examination of the success of former ELC students in kindergarten. The achievement scores of three kindergarten classes were examined (1988-1989, 1989-1990, and 1990-1991) and compared to respective district norms.

Results of the ITBS tests for the 1989 kindergarten cohort of former ELC students as compared to the district are presented in Table 5 and Figures 1 through 3. There are two very apparent features in these data. Firstly, the difference in scores between former ELC students and the district were negligible during kindergarten, but former ELC students began falling behind the district somewhat in the first and second grades. Secondly, the patternings of achievement through three years of elementary school in the subtests of reading, language and math were quite similar for both the former ELC students and the district. These data are interpreted as indicating the absence of pronounced differences in academic performance and in cognitive ability between former ELC students and the district in kindergarten through second grade.

Table 5

Early Childhood Development Program
Kindergarten Cohort ITBS Percentile Ranks
Former ELC Students Compared to District

Test Students	Cohort 1989 Kindergarten	 1990 First Grade	 1991 Second Grade
Reading			
ELC Total	77	50	47
ELC Minority (N = 66)	76	49	48
ELC Non-Minority (N = 6)	81	60	42
District	77	56	50
Language			
ELC Total	55	69	59
ELC Minority (N = 66)	55	71	61
ELC Non-Minority (N = 6)	59	48	42
District	53	74	64
Math			
ELC Total	64	57	61
ELC Minority (N = 66)	65	55	60
ELC Non-Minority (N = 6)	55	77	71
District	64	64	64

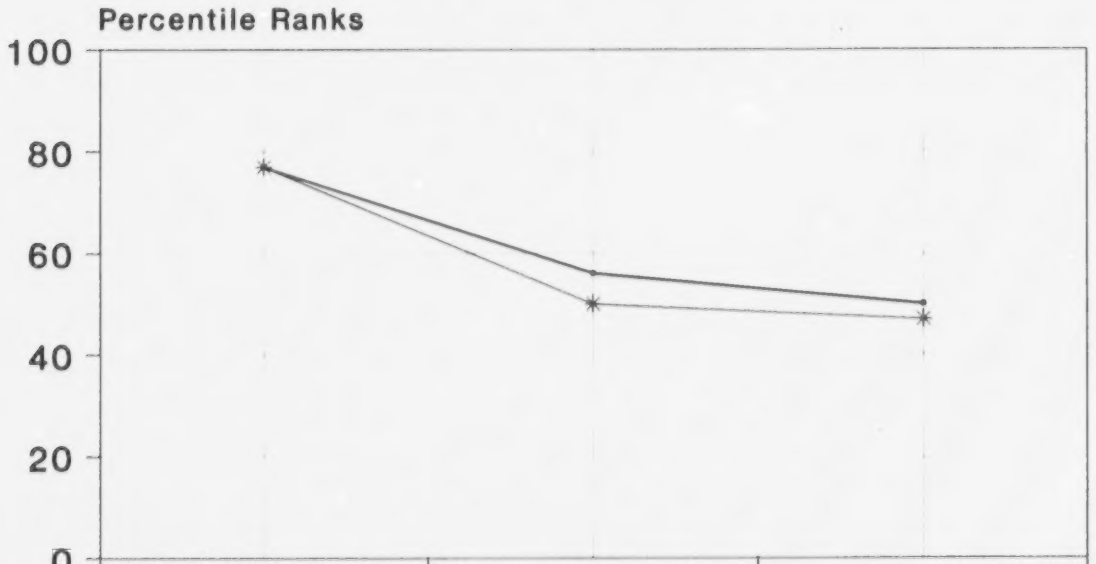
Note: Percentile ranks are based on mean grade equivalent scores.

To refine the comparison between former ELC and non-ELC students, it is necessary to eliminate as many pre-existing differences as possible. In order to effectively isolate ELC status, a random sample of non-ELC students currently enrolled in the same schools as former ELC students were selected. All students, both former ELC and non-ELC, were in second grade and enrolled in one of 37 schools throughout the district in 1990-1991. Analyses of variance with grade equivalent ITBS scores as the measure of achievement were performed. The mean scores were converted to percentile ranks for presentation (Table 6). Second grade former ELC students scored higher than their non-ELC peers in the reading subtest, but lower in language and math. The differences between former ELC and non-ELC students were not statistically significant ($p > .05$).

Several intriguing facts emerged from an examination of the three successive kindergarten classes. Table 7 shows the number of ELC students age-eligible to enter kindergarten for the 1988-1989, 1989-1990, and 1990-1991 school years. It is of interest to learn how many of those age-eligible to enter kindergarten did so. Included in Table 7 are the number of former ELC students currently enrolled in the KCMSD, both regular and special education classrooms,

FIGURE 1

ITBS Reading Achievement
1989 Kindergarten Cohort ELC Students

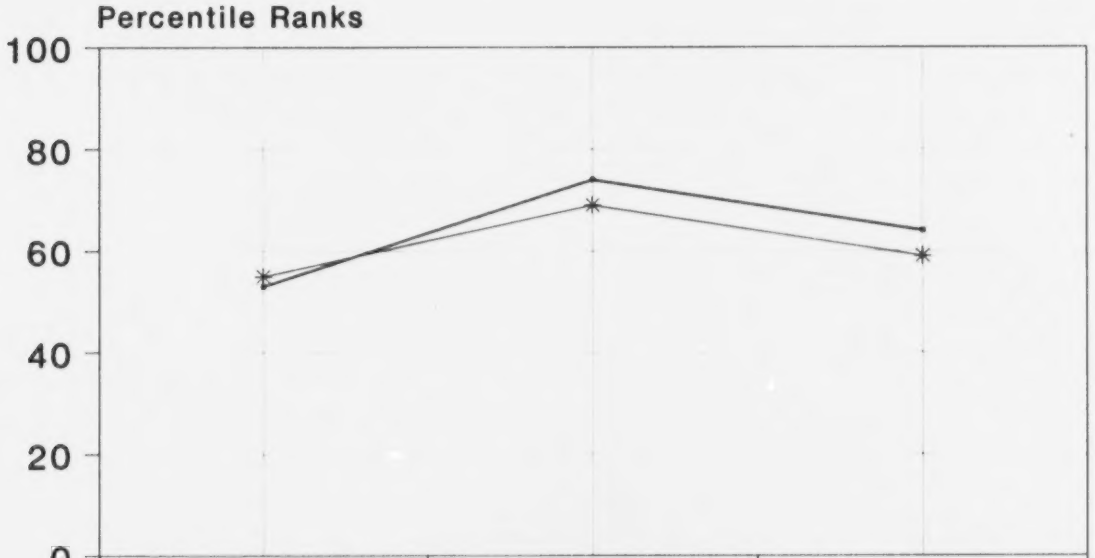


	Kindergarten	First	Second
Former ELC	77	50	47
District	77	56	50

Note:Percentile ranks were converted from mean grade equivalent scores.

FIGURE 2

ITBS Language Achievement
1989 Kindergarten Cohort ELC Students

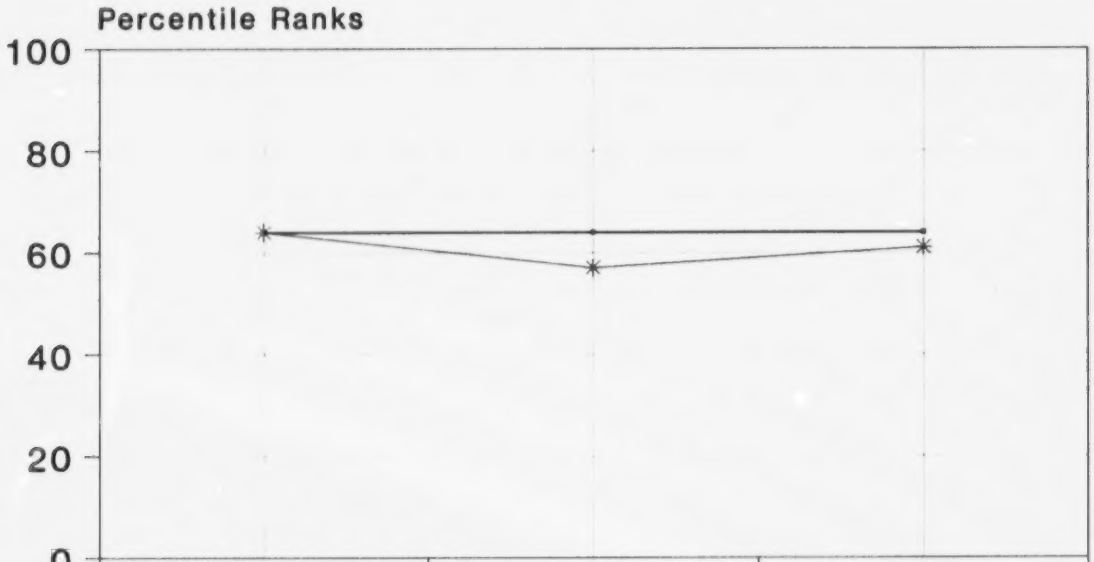


	Kindergarten	First	Second
Former ELC	55	69	59
District	53	74	64

Note:Percentile ranks were converted from mean grade equivalent scores.

FIGURE 3

ITBS Math Achievement
1989 Kindergarten Cohort ELC Students



	Kindergarten	First	Second
Former ELC	64	57	61
District	64	64	64

Note:Percentile ranks were converted from mean grade equivalent scores.

Table 6

Early Childhood Development Program
Summary Data Comparing Former ELC Students and a Random Sample of Non-ELC Students from the Same School, 1991 Second Grade ITBS Percentile Ranks

Test	ELC (N = 77)	NON-ELC (N= 78)	Probability
Reading	47	40	.67
Language	57	63	.57
Math	57	63	.63

Note: Percentile ranks were converted from mean grade equivalent scores.

Table 7

Early Childhood Development Program
Kindergarten Entrance Status and Current Enrollment Status of Former ELC Students

Year	Age-Eligible	Enrolled KCMSD 1990-1991 Reg. Class	Enrolled KCMSD 1990-1991 Special Educ.	Not Enrolled in KCMSD 1990-1991[1]	Enrolled in Another District or Moved Out of State
1988 - 1989	394	86(22%)	14(4%)	287(73%)	7(2%)
1989 - 1990	618	139(23%)	11(2%)	448(73%)	20(3%)
1990 - 1991	578	153(26%)	8(1%)	412(71%)	5(1%)

Note: Percentages are rounded to the nearest whole percent.

1 District student records indicated student either did not enroll in KCMSD any year since becoming age-eligible, present location is unknown, or there is no information available.

and those not enrolled in the KCMSD. The latter figure represents student whose status is unknown. A small percentage of students were reported as having moved out of state or attending school in another district (*i.e.*, Independence, North Kansas City). Less than a third of the age-eligible students actually enrolled in kindergarten in any year. The majority of these entered regular elementary classrooms. Failure to pass, being held back a grade (or two), or delaying entry for a year or more did not account for any of the missing students. The data clearly indicate that 1147 (72%) of the 1590 ELC students age-eligible to enter kindergarten since 1988 are not enrolled in the KCMSD. Furthermore, their current location is indetermi-

nate since they are no longer in the KCMSD student database. It is disconcerting to think that the majority of ELC students who reach 5 years of age are lost from the educational system.

Those ELC students who were age-eligible to enter kindergarten and who did so are succeeding. Table 8 and Figures 4 and 5 display the achievement scores of the 1989, 1990 and 1991 kindergarten classes of former ELC students. These students performed above district norms in reading (1990), language (1989 and 1991), and math (1989 and 1990). Furthermore, the kindergarten scores improved through time, with math falling off recently (Figure 4). Both minority and non-minority students contributed evenly to the trends in reading and math (Figure 5). The temporal gains in language were primarily due to non-minority progress, however.

Summary

The Early Childhood Development programs of Parents as Teachers (PAT) and the Early Learning Centers (ELC) completed the fifth year of program implementation. The Early Childhood Development programs screen and/or enroll children 0-5 years of age. The ELC

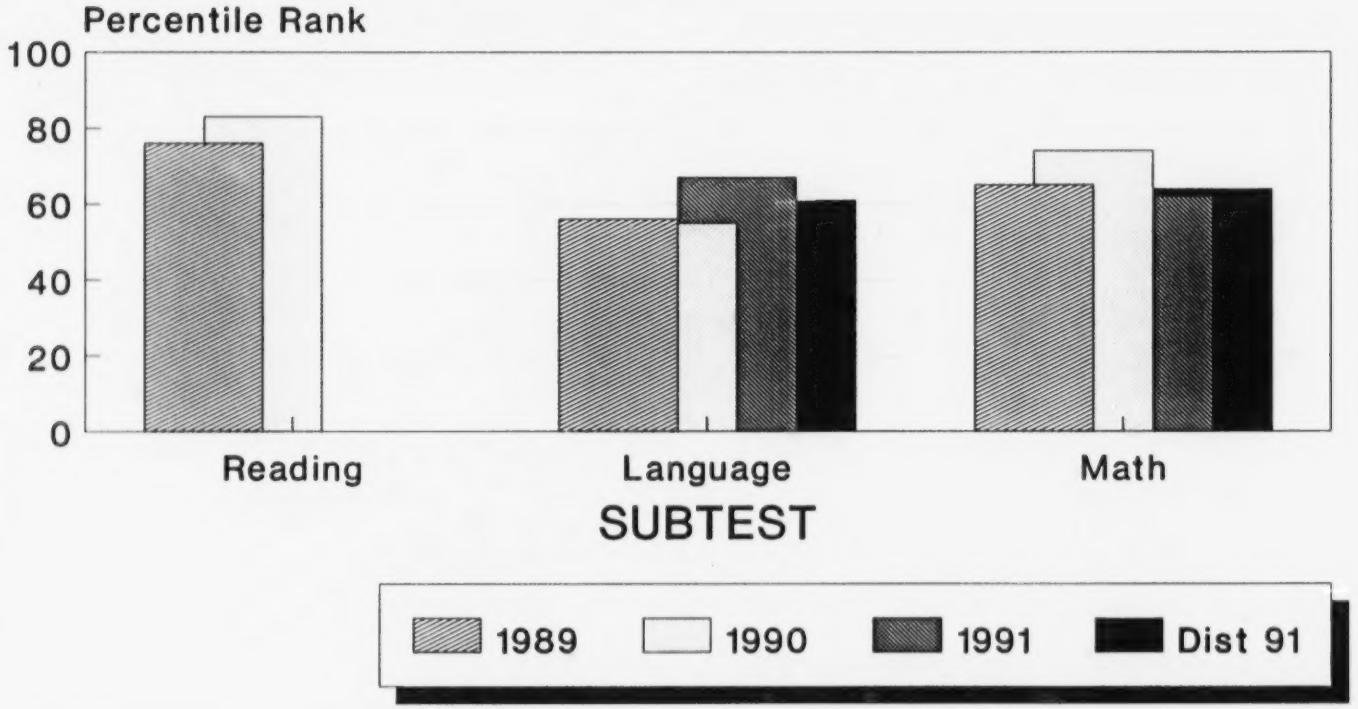
Table 8

Early Childhood Development Program
Former ELC Students Kindergarten Classes
ITBS Percentile Ranks

	Kindergarten Classes		
Test Students	1989 (N = 85)	1990 (N = 139)	1991 (N = 153)
Reading			
ELC Total	76	83	No Test
ELC Minority	76	83	
ELC Non-Minority	77	83	
District	77	81	
Language			
ELC Total	56	55	67
ELC Minority	56	54	56
ELC Non-Minority	53	60	82
District	53	58	61
Math			
ELC Total	65	74	62
ELC Minority	66	73	61
ELC Non-Minority	55	77	64
District	64	67	64

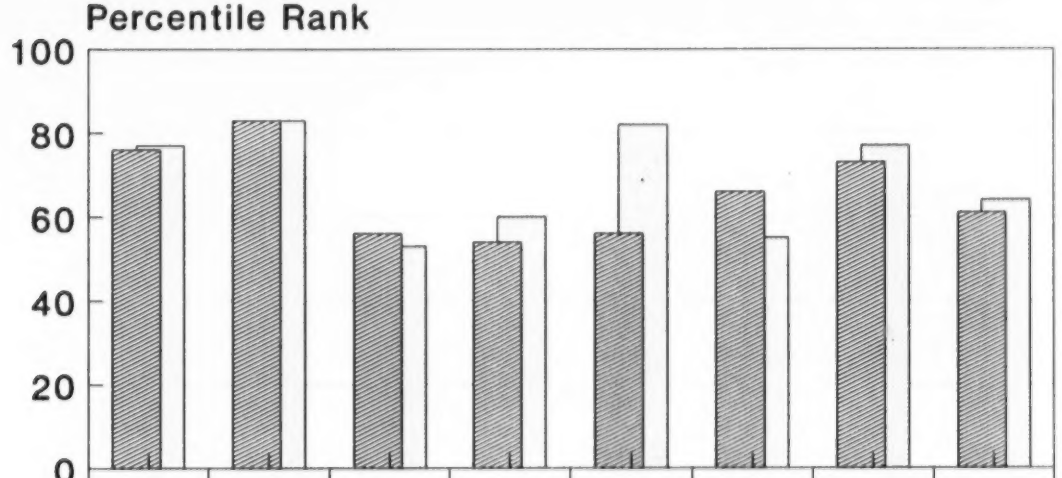
Note: Percentile ranks are based on mean grade equivalent scores.

FIGURE 4
Former ELC Students
Kindergarten 1989, 1990 & 1991



Percentile ranks were converted from mean grade equivalents.

FIGURE 5
Former ELC Students
Kindergarten 1989, 1990 & 1991



	1989R	1990R	1989L	1990L	1991L	1989M	1990M	1991M
Minority	76	83	56	54	56	66	73	61
Non-minority	77	83	53	60	82	55	77	64

Reading, Language, Math by Year

Percentile ranks were converted from mean grade equivalents.

programs screen children to identify developmental delays, then enroll 1000 of those children in one of the 25 Early Learning Center classrooms located in 14 elementary schools within the KCMSD. PAT attempts to teach parents child learning and parenting strategies in order to effectively reduce the number of children with developmental delays and to enhance the cognitive abilities of unimpaired or gifted children.

End-of-year data show that the ELC programs have operated near capacity since implementation. The "near capacity" data should be qualified by stating that students are not placed into an ELC classroom after mid-April since only six weeks of school remain. Full capacity is maintained until April through placement of students into an ELC classroom from the waiting list. Enrollment of families in the PAT programs located throughout the district have increased tremendously since implementation. A total of 20,868 families of children 0-5 years have benefitted from the PAT program since it started in 1986.

The number of children 1-5 years of age screened has increased steadily through the years as well. Unfortunately, the number of children found at risk for developmental delays has increased substantially, also.

For approximately 25% of the ELC students, the programs work to curb the delays and allow them to catch-up academically to their peers. This fact is demonstrated through statistical analysis of the 1989 kindergarten cohort of former ELC students, which yields longitudinal data for three years of elementary school. From kindergarten through second grade, only slight differences were found in ITBS scores and in the achievement trends of these scores between a cohort of former ELC students and the district. In fact, former ELC students scored at or above district norms in reading, language and math as kindergartners. Analyses of variance were performed comparing second grade ITBS scores of former ELC and non-ELC peers currently enrolled in the same school. No statistically significant differences ($p > .05$) were found in achievement between the comparison groups. Also, successive kindergarten classes of former ELC students performed above or within 3 points of district norms on ITBS tests in reading, language and math. Furthermore, the performance of kindergartners in the reading and language subtests of the ITBS improved since 1989.

Of great concern is the 72% of ELC students age-eligible to enter kindergarten every year but who did not do so according to district records. Furthermore, the current location of these students is unknown.

References

Hale, P.D.& Levine, D.U. (1986). *Long-Range Magnet School Plan*. Kansas City, MO: Kansas City, Missouri School District.

The School District of Kansas City, Missouri and the Department of Elementary and Secondary Education. (1990). *The School District of Kansas City, Missouri Early Childhood Development Program, Program Implementation Model, 1990-1991*. Kansas City, MO: Kansas City, Missouri School District.

Acknowledgements

The author would like to recognize clerical specialist, Pat McIntosh, of the Evaluation Department. Her professionalism and perseverance in publication management were invaluable in the completion of this evaluation report.

Appendix A

Early Learning Centers District Locations

Appendix Table A-1

Early Learning Centers District Locations

1987 - 1988	1988 - 1989	1989 - 1990	1990 - 1991
Askew	Askew	Askew	Askew
Attucks	Attucks	Attucks*	Attucks*
Franklin*	Franklin*	Franklin*	Franklin*
Graceland	Graceland	Graceland	Graceland
Cook (Hartman)*	Hartman*	Hartman*	Hartman*
Holmes	Holmes	Holmes	Holmes
Kumpf	Kumpf	Kumpf	Kumpf
Longfellow	Longfellow	Longfellow*	Longfellow*
Switzer	(New Faxon) Switzer*	New Faxon*	New Faxon*
N. Rock Creek*	N. Rock Creek*	N. Rock Creek*	Trailwoods/N. Rock Creek*
Richardson	Richardson	Richardson	Troost*
Weeks	Troost	Troost*	Weeks*
Whittier	Weeks	Weeks*	Whittier
	Whittier	Whittier	Willard/Holliday*
	Willard	Willard/Holliday	

* Denotes magnet theme schools.